Amendments to the Claims:

This listing of claims replaces all prior listings, and versions, of claims in the present application.

Listing of Claims:

1. (Currently Amended) A wireless telecommunication system including an air interface ~~operating according to a code division multiple access (CDMA) scheme~~, said system comprising:

an encoder for encoding an information stream for transmission;

a modulator for modulating the encoded information stream;

a transmitter operating according to an orthogonal frequency division multiplexing (OFDM) scheme, the transmitter comprising:

at least one serial-to-parallel (S/P) converter for dividing the modulated symbol stream into <u>a plurality of blocks, each block comprising</u> a plurality of streams;

a plurality of spreaders for spreading each of the plurality of streams with a spreading code;

<u>a plurality of summers, each summer for summing the plurality of streams associated with at least one of the plurality of blocks</u> ~~at least one summer for summing the plurality of spread streams~~ into at least one symbol stream;

<u>a plurality of post-summer S/P converters for dividing the symbol stream output of each summer into a plurality of parallel streams;</u>

<u>an interleaver for receiving and interleaving the parallel-stream output of the plurality of post-summer S/P converters, wherein the output of the interleaver is a plurality of symbol streams;</u> and

an OFDM modulator for spreading symbol streams in the frequency domain using an inverse fast Fourier transform; and

wherein the transmitter applies at least one variable loading parameter.

2. (Original) The system of claim 1, wherein the variable loading parameter is the coding rate.

3. (Original) The system of claim 1, wherein the variable loading parameter is the data rate.

4. (Original) The system of claim 1, wherein the variable loading parameter is the number of spread streams in the plurality of spread streams provided to the summer.

5. (Canceled)

6. (Currently Amended) The system of claim 1[[5]], wherein the at least one S/P converter comprises a plurality of S/P converters.

7. (Canceled)

8. (Canceled)

9. (Original) The system of claim 1, wherein the air interface has a limited transmission bandwidth and application of the variable loading parameter is a function of the bandwidth available for transmission.

10. (Original) The system of claim 9, wherein the bandwidth available for transmission is subject to vary over time.

11. (Original) The system of claim 1, wherein the air interface is required to carry a varying amount of traffic and application of the variable loading parameter is a function of the current traffic load.

12. (Original) The system of claim 1, wherein the air interface is subject to noise affecting the quality of the transmitted information and application of the variable loading parameter is a function of the noise introduced in over the air interface.

13. (Original) The system of claim 1, wherein the air interface is subject to channel fading affecting the quality of the transmitted information and application of the variable loading parameter is a function of the fading state.

14. (Currently Amended) A method for processing an information-bearing signal to be transmitted over an air interface in a ~~CDMA~~ communication network; said method comprising ~~the steps of~~:

    encoding the information;

    modulating the encoded signal onto a carrier;

    dividing the modulated signal into a plurality of <u>blocks, each block comprising a</u> <u>plurality of</u> streams;

    spreading each of the plurality of streams with a spreading code;

    <u>summing the plurality of the streams associated with at least one of the plurality</u> <u>of blocks into at least one symbol stream;</u>

    <u>dividing the symbol stream output of each summer into a plurality of parallel</u> <u>streams;</u>

    <u>interleaving the plurality of parallel streams to produce a plurality of symbol</u> <u>streams;</u>

    modulating the <u>symbol</u> ~~spread~~ streams in an OFDM modulator; and

    determining whether to apply a variable loading parameter.

15. (Original) The method of claim 14, wherein the step of determining is performed prior to the encoding step.

16. (Original) The method of claim 14, wherein the variable loading parameter is the coding rate.

17. (Original) The method of claim 14, wherein the variable loading parameter is the data rate.

18. (Original) The method of claim 14, wherein the variable loading parameter is the number of streams created in the dividing step.

19. (Canceled)

20. (Currently Amended) The method of claim 14, wherein application of the variable loading ~~leading~~ parameter is a function of the quality of the air interface.